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INFLUENCE OF RESOURCES ACROSS ON SUSTAINABILITY OF CROP PRODUCTION

Statement of the problem. Ensuring the sustainability of production and improve food security depends on the availability, efficiency resource potential of agricultural enterprises. Effective use of resource potential is objectively important factors influencing the sustainability of crop production. Therefore, the analysis endowments enterprise is extremely important because it helps to identify shortages in some surplus resources and others that require further balancing.

Analysis of recent research and publications. The issue of sustainable agricultural production and the impact of various factors on its level has always been important and is reflected in a considerable number of scientific papers. Much attention is paid to the study many domestic scholars O.V. Shubravskya [1], V.J. Shiyanyan [2], O. Oleinik [3], D. Shiyanyan [4], V.A. Slauta [5], A. Zubov in [6].

In today's economic research and determining the effect endowments enterprises Sustainability requires further research and refinement.

Forming the purposes of Article. The purpose of this paper is to determine the effect endowments on sustainability of crop production on the example of ag-

ricultural enterprises Kharkiv region.

The main material research. Resource potential is considered as a set of interrelated resources that are used or can be used to achieve these goals [7]. Agricultural production combines organizational and technological resources that makes it stand out in a specific branch of production. Ensuring the efficiency of agricultural production is only possible rational use of its productive resources, knowledge of the laws of creation and playback. In agriculture, most of the objects and means of labor have a biological basis.

Agricultural production is based on the organic unity of factors such as land, labor, material and non-material, financial resources. Lack of enterprise one of these resources complicates the process of industrial activity, inhibits the achievement of competitive agricultural production. Traditionally, there are three classic types of economic resources: human (labor), natural (land, minerals) and production (capital), which emphasize P. A. Samuelson and V.D. Nordhaus [8, p. 33].

Characterizing the resource potential of farms to determine its impact on the sustainability of crop production, primarily to provide a description of the gross

1. Dynamics of gross output of agricultural enterprises of Kharkov region during 1990 - 2011 years, mln.

| Years | The volume of gross output (at constant prices of 2010), total, mln. | including: crop production, mln | share of crop production in total, % | including: animal products, mln. | share of livestock in total, % | The annual rate of growth of gross output, total | The annual rate of growth of crop production | The annual rate of growth of livestock production |
|--------------------------|--|---------------------------------|--------------------------------------|----------------------------------|--------------------------------|--|--|---|
| 1990 | 12404,4 | 7246,3 | 58,4 | 5158,1 | 41,6 | 1,00 | 1,00 | 1,00 |
| 1991 | 10321,6 | 5964,5 | 57,8 | 4357,1 | 42,2 | 0,83 | 0,82 | 0,84 |
| 1992 | 8749,3 | 5493,7 | 62,8 | 3255,6 | 37,2 | 0,71 | 0,76 | 0,63 |
| 1993 | 8782,4 | 5974,0 | 68,0 | 2808,4 | 32,0 | 0,71 | 0,82 | 0,54 |
| 1994 | 6861,5 | 4521,5 | 65,9 | 2340,0 | 34,1 | 0,55 | 0,62 | 0,45 |
| 1995 | 6255,7 | 4389,3 | 70,2 | 1866,4 | 29,8 | 0,50 | 0,61 | 0,36 |
| 1996 | 5149,7 | 3636,1 | 70,6 | 1513,6 | 29,4 | 0,42 | 0,50 | 0,29 |
| 1997 | 5038,3 | 3992,5 | 79,2 | 1045,8 | 20,8 | 0,41 | 0,55 | 0,20 |
| 1998 | 5149,7 | 3636,1 | 70,6 | 1099,5 | 21,4 | 0,42 | 0,50 | 0,21 |
| 1999 | 3941,4 | 2903,2 | 73,7 | 1038,2 | 26,3 | 0,32 | 0,40 | 0,20 |
| 2000 | 3929,8 | 3085,7 | 78,5 | 844,1 | 21,5 | 0,32 | 0,43 | 0,16 |
| 2001 | 5089,9 | 4031,1 | 79,2 | 1058,8 | 20,8 | 0,41 | 0,56 | 0,21 |
| 2002 | 5260,2 | 3999,1 | 76,0 | 1261,1 | 24,0 | 0,42 | 0,55 | 0,24 |
| 2003 | 3828,4 | 2712,4 | 70,8 | 1116,0 | 29,2 | 0,31 | 0,37 | 0,22 |
| 2004 | 4788,1 | 3713,8 | 77,6 | 1074,3 | 22,4 | 0,39 | 0,51 | 0,21 |
| 2005 | 5206,1 | 4029,8 | 77,4 | 1176,3 | 22,6 | 0,42 | 0,56 | 0,23 |
| 2006 | 4923,9 | 3608,3 | 73,3 | 1315,6 | 26,7 | 0,40 | 0,50 | 0,26 |
| 2007 | 5212,1 | 4060,9 | 77,9 | 1151,2 | 22,1 | 0,42 | 0,56 | 0,22 |
| 2008 | 6483,4 | 5342,3 | 82,4 | 1141,1 | 17,6 | 0,52 | 0,74 | 0,22 |
| 2009 | 5406,2 | 4129,9 | 76,4 | 1276,3 | 23,6 | 0,44 | 0,57 | 0,25 |
| 2010 | 4586,5 | 3204,0 | 69,9 | 1382,5 | 30,1 | 0,37 | 0,44 | 0,27 |
| 2011* | 7293,5 | 5896,5 | 80,8 | 1397,0 | 19,2 | 0,59 | 0,81 | 0,27 |
| coefficient of variation | 0,57 | 0,68 | 0,53 | 0,11 | 0,86 | 0,38 | 0,43 | 0,58 |

Source: Statistical Yearbook "Gross agricultural output Ukraine" in 1990 - 2010 years, * data statistical bulletin "Gross agricultural output Ukraine" in 2011 [electronic resource] Statistics of Agriculture and the Environment - Mode of access: <http://agroua.net/statistics/>

output per unit of land area (Table 1). The volume of gross agricultural production (at constant prices of 2010) in 2011 reached 7293.5 mln., including 80.8% of crop and livestock products 19.2%. The volume of gross output in 2011 compared to 1990 decreased by 41.2 % or 5110.9 mln. The largest volume of gross output over the period observed in 1990, 12,404.4 million, from 1991 to 2000 showed a trend towards a reduction in gross output, compared to 1990 by 68.2 %.

From 2001 to 2002, gross output increased to 5260.2 million, in 2003 the gross output decreased and reached the lowest level for the entire study period. Since 2004 the volume of gross agricultural production is constantly fluctuating. The coefficient of variation of gross agricultural production in the whole area during this period reached a level of 0.57, which is characterized as a very strong fluctuations and inconsistent with sustainable attributes.

The volume of gross crop production compared to 1990 decreased by 18.62 %, while the share of crop production in total gross output increased from 58.4% in 1990 to 80.8 % in 2011, due to a decrease in the share of livestock products in total from 41.6 % to 19.2% in 2011. In addition, there is a very strong indicator of the level of vibration - the coefficient of variation reached a level of 0.68.

The annual rate of growth of crop production indicates a decrease in crop production during the study period compared to 1990.

The volume of gross livestock acquired tendencies decrease compared to 1990, gross production decreased by 72.9 %, the lowest gross livestock production was observed in 2000, 844.1 million. The share of gross

animal production in total production decreased from 41.6% in 1990 to 19.2% in 2011. The lowest share of gross animal production in total production was recorded in 2008 17.6 %. The coefficient of variation was 0.11, which is characterized as a moderate level fluctuations. As a result of the research it was found that for the period 1990-2011 years, the nature of changes in the volume of gross agricultural production area became trends reduction, in addition, established a very strong fluctuations of the studied parameters over the years. Analyzing the dynamics of agricultural enterprises main types of crop production has been found that in the period 1990-2011 years to reduce the share of crop production in total gross output was due to a decrease in the production of sugar beet, potatoes, vegetables, and fruits and berries.

Farms are grouped into seven groups according to the size of agricultural land, which made it possible to determine for each group level supply of resources enterprises (Table. 2). Most supply of resources compared to the other groups were seven companies of the group to which the smallest number of enterprises. Companies of this group are the largest in size of agricultural land, as well as the level of security the main production resources.

Companies with the lowest area of agricultural land belonging to the first group, the lowest average number of employees employed in the agricultural production, belongs to the second group.

Sustainability of crop production in agricultural enterprises of Kharkov region of different size (Table 3) was also investigated by statistical grouping of farms by size of agricultural land. These data led to the following

2. Provision of resources farms Kharkiv region different size, 2011.

| Groups of enterprises by size of agricultural land, ha | Number of companies in the group | Average of 1 Company | | | | | | | |
|--|----------------------------------|-----------------------|---------------------------|---------------|---|---------------------------------|-------------|--------------------|---------------------------|
| | | agricultural land, ha | including arable land, ha | Level plowed% | average number of employees employed in the agricultural production people. | share of crop workers in total% | Wages, ths. | Depreciation, ths. | Other material costs ths. |
| I. Less 250 | 46 | 111 | 105 | 92,2 | 50 | 66,5 | 433,7 | 175,7 | 249,9 |
| II. 251-500 | 60 | 357 | 346 | 96,6 | 15 | 85,9 | 112,9 | 67,6 | 130,7 |
| III. 501-1000 | 85 | 712 | 685 | 96,3 | 19 | 93,1 | 121,9 | 90,6 | 323,9 |
| IV.1001-1500 | 88 | 1237 | 1188 | 96,0 | 17 | 92,2 | 208,7 | 190,3 | 566,4 |
| V.1501-3000 | 142 | 2103 | 2000 | 95,3 | 36 | 85,3 | 438,0 | 356,8 | 973,8 |
| VI.3001-6000 | 98 | 4094 | 3895 | 94,9 | 92 | 76,8 | 1091,7 | 864,8 | 2089,4 |
| VII. More 6001 | 33 | 9972 | 9619 | 95,6 | 195 | 78,8 | 2781,7 | 2432,5 | 5042,8 |
| The average | 552 | 2134 | 2041 | 95,4 | 47 | 82,7 | 551,9 | 440,5 | 1057,5 |

Source: author's calculations according to the statistical report "Basic economic performance of agricultural enterprises" (f. № 50-cr).

3. Sustainability of crop production in agricultural enterprises of Kharkov region different in size 2011.

| Groups of enterprises by size of agricultural land, ha | Number of companies in the group | Cereals and legumes | | sunflower | | Sugar beet (factory) | |
|--|----------------------------------|---------------------------------|---|---------------------------------|---|---------------------------------|---|
| | | The average yield for the group | The coefficient of variation of productivity in the group | The average yield for the group | The coefficient of variation of productivity in the group | The average yield for the group | The coefficient of variation of productivity in the group |
| I. Less 250 | 46 | 19,7 | 0,75 | 12,0 | 0,95 | 0,0 | 0,00 |
| II. 251-500 | 60 | 58,9 | 0,38 | 33,5 | 0,51 | 38,3 | 0,48 |
| III. 501-1000 | 85 | 54,3 | 0,57 | 45,0 | 0,63 | 96,4 | 0,43 |
| IV.1001-1500 | 88 | 61,4 | 0,57 | 45,4 | 0,67 | 127,7 | 0,40 |
| V.1501-3000 | 142 | 73,8 | 0,82 | 54,2 | 0,92 | 126,8 | 0,63 |
| VI.3001-6000 | 98 | 77,7 | 0,50 | 53,5 | 0,66 | 218,0 | 0,33 |
| VII. More 6001 | 33 | 77,9 | 0,18 | 48,3 | 0,23 | 282,6 | 0,095 |
| The average | 552 | 31,4 | 0,43 | 22,3 | 0,51 | 62,0 | 0,30 |

Source: author's calculations according to the statistical report "Basic economic performance of agricultural enterprises" (f. № 50-cr).



conclusions. The lowest average yield of grain and leguminous crops refers to the first group with the smallest size of agricultural land, the coefficient of variation of yield for the group was 0.75 indicating a very strong fluctuations in productivity. In this group also observed the lowest average yield of sunflower yield coefficient of variation for the group is the highest - 0.95, which also indicates a very strong fluctuations in productivity. The highest average yield of major crops fall into seven major groups of enterprises by size of agricultural land, except that there is a lowest level fluctuations crop yields. The coefficient of variation of productivity in the group of cereals and legumes - 0.18, indicating a moderate level fluctuations, the coefficient of variation of yield of sunflower was 0.23, indicating strong fluctuations, but compared to the other groups, they are the lowest level of fluctuations in yield of sugar beets in the group - 0.095, indicating a weak oscillation. Based on the calculated data can come to a conclusion about the dependence of sustainable crop production on farms supply of resources. The higher supply of resources farm the lower level fluctuations in yield and yield a higher level of culture, as indicated by figures seven groups (Table 2 and 3). The first group suggests the opposite trend, the lower the level of r supply of resources enterprise, the lower level of crop yields and higher levels of productivity fluctuations.

Conclusions. The largest share in the total gross output is crop that has a very high level of fluctuation that does not match the attributes of sustainable production. Examining the impact supply of resources farmers on sustainability of crop production, we can argue about the dependence of the level of sustainable production supply of resources businesses. Since high supply of resources have a large-scale enterprise, the

question arises on how to improve supply of resources enterprises of different size. Due to internal reserves enterprises achieve increasing supply of resources impossible. The required state intervention in relation to the stabilization of markets and production factors of agricultural production, which will create the conditions for the reproduction of capital resources and ultimately achieve sustainability of production.

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